LDWSF 12.3.54
10/10/86

MUNICIPALITY OF METROPOLITAN SEATTLE

INDUSTRIAL WASTE DISCHARGE PERMIT

APPLICATION FORM

RECEIVED
OCT 10 1986
METRO

Application is hereby made for a permit to discharge wastes into the Municipality of Metropolitan Seattle sewer system in accordance with RCW 90.48.165, RCW 35.58.180, RCW 35.58.200, RCW 35.50.360, and Metro Resolution 2310.

Section A General Information:

1. Company Name Pioneer Construction Materials Co.
2. Mailing Address P.O. Box 1730, Seattle, WA 98111
3. Location of Plant Discharging Wastes if different from above 5975 East Marginal Way South, Seattle, WA 98134
4. Name, title, address, and telephone number of person to contact concerning information in this questionnaire:

   Name Leonard Compher Title Manager

   Address P.O. Box 1730, Seattle, WA 98111 Phone No. 764-3000

Section B Product or Service Information:

1. Brief narrative description of manufacturing or service at plant address:

   Ready Mix Concrete Plant, Sand & Gravel Storage and Sales.

2. Raw Materials and Chemicals Used in Processes:

Brand Name	Chemical, Scientific or Actual Name	Quantities Used per Day Average	Maximum
	Portland Cement	35,014 tons	167 tons
	Washed Sand & Gravel	246,984 tons	1,054 tons
	Fly Ash	1,842 tons	9 tons
	*Plastocrete 150 (Water Reducing Admixture)	6,500 Gals.	31 Gals.
	*AE 10 Air Entrainment	24 00 Gals.	11 Gals.
	*Daratard 40 (Retarding Admix.)	7 82 Gals.	3 Gals.
	*100XR Pozzolith (Retard. Admix.)	7 82 Gals.	3 Gals.
	*Calcium Chloride (Accel. Admix.)	10,000 Gals.	47 Gals.
	*Pozzolith 555A (Acceler. Admix.)	3,000 Gals.	14 Gals.

*Note On Maximum day all these admixtures cannot be used in conjunction

3. Describe how raw chemicals and hazardous materials are stored. Have steps been taken to insure that spills resulting from accidental spillage or ruptured containers will not enter a waterway or sewer?

These materials are stored in steel tanks above ground and materials are pumped into them and then pumped and metered into concrete mix.

4. Products Manufactured or Processed:

	Products	Quantity and Unit Average	Maximum
1.	Ready Mix Concrete	594 c/y per day	680 c/y per day
2.	Sand & Gravel	298 tons per day	340 tons per day
3.			
4.			
5.			

Section C Plant Operational Characteristics:

1. Plant Operations:

	Days per Year	Number of Employees per Shift Day	Night	Swing
Average	240	100	-	5
Maximum	250	110	-	5

2. Explain any seasonal variation you may have in waste discharge volumes, plant operations, raw materials, and chemicals used in processes, and/or production:

The months of November thru February are normally low production months.

3. Give a detailed description of the sources of all industrial waste within your industry. Describe in detail the treatment given each of these wastes. Include in this description the disposal methods used for these wastes and also for any sludge collected by your waste treatment system. Include a schematic flow diagram showing the sources of all wastes and their flow pattern. Include this information with your application as Exhibit 1.

4. Metal finishing and metal etching industries give a breakdown of capacity and number of tanks by solution type, concentration, and estimated dragout. Identify tanks containing significant quantities of phosphorous, nitrogen, heavy metals, cyanide and etching solutions that concentrate heavy metals. Describe what precautions have been taken to contain and prevent discharge of plating solutions spilled as a result of ruptured or leaking tanks. Include this information with your application as Exhibit 2.

Section D Water Consumption and Loss:

1. Source of supply City of Seattle Water Supply

2. List water consumption within the plant.
(See attached information)

	Average Gal./Day	Maximum Gal./Day
a. Industrial processing	20,650	23,644
b. Cooling	-0-	-0-
c. Boiler feed	-0-	-0-
d. Water incorporated into product	20,790	23,804
e. Other (Specify)	-0-	-0-

Raw water treatment (specify water conditioning chemicals used) _____

3. List discharge or water losses to:

	Average Gal./Day	Maximum Gal./Day
a. Municipal sewer (industrial and sanitary waste water)	13,900	15,915
b. Surface waters and storm sewers (specify)	-0-	-0-
c. Waste haulers	-0-	-0-
d. Evaporation	Unknown	Unknown

In reviewing our operation located at 5975 East Marginal Way South, we found that annual water usage being charged to this location was 29,328,581 gallons or an average of 2,444,048 gals. per month or 122,202 gallons per day based on 240 work days per year.

Based on our knowledge of water used in our product, volumes of water required to wash up trucks, mixers and plant equipment, we feel that water being charged to our operation is in error.

We have initiated a study to determine where the problem is occurring and its correction.

Attached is a report outlining our assumptions and volumes of water consumed on a per gallon/day basis. This report shows a consumption rate of 69.8 gal. per cubic yard of concrete produced. EPA's "Guidance Development Document Effluent Limitations guidelines and new source performance standards for concrete products" dated 1978, data on the ready mix industry indicates that we are in the right range for water consumed per cubic yard.

4. Describe all waste water treatment equipment or processes in use: 1. Washing water discharge to recovery screw for sand and gravel separation, then to sedimentation ponds.

2. Wash water to storage tank after. After 6 - 8 hours clear water pumped off to storm sewer.

5. Planned waste treatment improvements: (Submit on separate sheet as Exhibit 3). Describe any additional treatment or changes in waste disposal methods in planning or under construction.

6. Give any additional information or comments you feel necessary to clarify this application as Exhibit 3. Include all information for previous questions, where additional space is necessary as part of Exhibit 3.

7. The information given on this application is correct and accurate to the best of my knowledge.

Leonard A. Compher
Signature

Leonard A. Compher
Printed

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Date

Manager
Title

* Please specify units. For example: Tons/day, pounds per day, barrels per day, etc.

WATER USAGE AT PIONEER CONSTRUCTION MATERIALS CO.
5975 EAST MARGINAL WAY SOUTH PLANT

Water usage for concrete operation assuming 100% city water usage. It should be noted that:

1. Ready mix trucks are being washed up 100% with reclaimed water.
2. 20% of mixes are batched with reclaimed water.
3. 40% of plant mixer wash up water is reclaimed water.
4. All volume based on 594 cubic yards per day assumption of average water used:

	Gal./Day
*Water incorporated into concrete mix	20,790
Water used to fill truck tanks	8,400
*Plant wash up	3,500
*Truck wash up at end of day	19,800
Yard wash down	5,000
Employees	3,500
	60,990
Less reclaimed water recycled:	
*Plant wash up (#3 - 40%)	1,400
*Truck wash up (#1 - 100%)	18,150
*Water in mix (#2 - 20%)	4,158
Total water consumed per day	37,282
Less city water incorporated in concrete mix 20,790 - 4,158 =	16,632
Water sent out in concrete truck water tanks not returned 8,400 - 1,650 =	6,750
Water to be disposed of per day	13,900

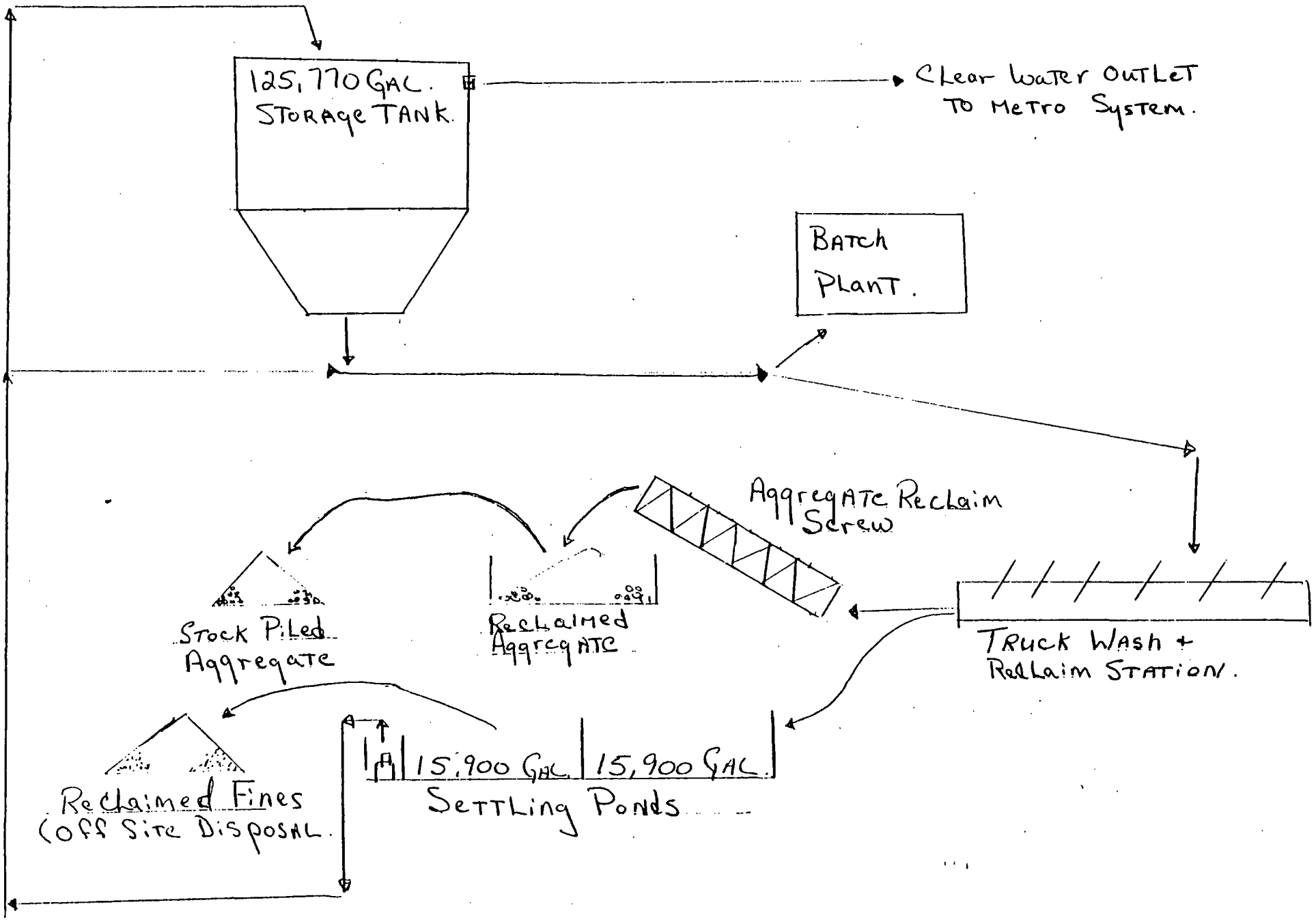
13,900 x 250 days = 3,475,000 annual
3,475,000 ÷ 12 = 289,583 monthly

Total city water consumed per day - 41,440 gals.

60,990 - (1400+18,150) = 41,440 ÷ 594 cu. yds. = 69.8 gal. per cu. yd.

41,440 x 250 days = 10,360,000 annual
10,360,000 ÷ 12 = 863,333 monthly

Pioneer Construction Materials Company.
Truck Wash System.



Assumes 594 Cubic Yards Per Day

	Gal./Day
*Water in mix 594 x 35 =	20,790
Processing:	
Trucks used (assume 3.0 cu. yds. for 6 hours)	
(594 ÷ 18 = 33 trucks/594 ÷ 7 cu. yds. = 85 trips)	
Truck water tanks - 33 trucks @ 100 gal. =	3,300
Refill water tanks 60 gal. x 85 trips =	5,100
*Plant wash up during day	
10 x 350 gal. =	3,500
*Truck wash up end of day	
600 gal. x 33 trucks =	19,800
Yard wash down	5,000
Employees 100 x 35 =	3,500
	60,990
Less reclaimed water:	
Truck wash up 19,800	
Water returning on trucks 50 gal. x 33 = 1,650	18,150
40% of plant wash up water	1,400
20% of batch water	4,158
	37,282
Total water consumed per day less city water	
incorporated in concrete mix 20,790 - 4,158 =	16,632
Water send out in concrete truck water tanks	
not returned 8,400 - 1,650 =	6,750
Water to be disposed of per day	13,900